I am writing to express STRONG OPPOSITION to the current Broadband over Power Line (BPL) proposals.

I am an Amateur Radio operator, license W0TDD. I operate at what are called QRP levels, less than 5 watts, and usually mobile with an antenna less than 8 feet long. I make regular contacts all around the United States and frequent contacts into several countries all around the globe. Some logged and confirmed contacts are more than 1,000 miles per watt.

The NTIA report in actual testing in Section 5.5 concluded that BPL did cause interference.

> "At one measurement location where a large number of BPL devices were deployed on multiple three-phase and single-phase MV power lines, appreciable BPL signal levels (i.e., at least 5 dB higher than ambient noise) were observed beyond 500 meters from the nearest BPL energized power lines."

This is just a few dozen test installations, not with the millions that the BPL promoters are saying they would like to see installed.

Further, in modeling, the NTIA report concluded that the exact type of communications service that I reference above in the Amateur Radio service, and the radio services that our law enforcement, fire, ambulance, FEMA, and other critical infrastructure services use would also be DRASTICALLY impacted -- virtually made unusable in any populated area where BPL is deployed. In Section 6.6.1 they state:

> "...for frequencies less than 30 MHz, virtually all points close to the line would experience (I+N)/N levels greater than 10 dB. In other words, there would be at least a ten-fold increase in total receiver noise power on the street adjacent to the BPL device and power lines. At 40 MHz, a majority of the areas in a road along the power line would see this level of interference."

The report also shows that there would be significant impact to aircraft and ships. In the worst case shown in table 6-4, an aircraft flying over an installation of 300 BPL devices at a height of 6Km (nearly 20,000 feet) would see more than a 12x increase in signal noise on the 15MHz band.

The report also showed in section 6.6.4 that:

> "Results indicated that multiplying the number of BPL devices by a factor of four produced a straightforward 6 dB increase in aggregate interfering BPL signal power."

The current BPL proposals would interfere from 1.7MHz to 80Mhz, and if adopted widely (as is the BPL proponents wish), would be 24x7 almost spectrum-wide continuous interference. This is far more bandwidth than would EVER be provided to a radio service. Although the BPL proponents think they are "using a wire" for the last mile, they are using unbalanced wires, which are antennas.

And, although the NTIA report on BPL focused on "Near Field" interference, the problem will actually be much worse and global in scope. Radio frequencies do get weaker with distance and travel in a straight line for the most part, but the ionosphere bends or reflects radio signals back to earth and around the globe. That is why I can make 2-way contacts with Brazil, England, Germany, Spain, and the Ukraine using just 5 watts and an omni-directional antenna.

The NTIA also makes the point that higher-gain directional antennas will be affected even more by BPL and at much farther distances than omni-directional antennas. In at least one instance, the power company's response to this was "if you pick up interference when pointing in a specific direction, point the antenna somewhere else." This is absolutely non-sensical when trying to establish communications between two points. You MUST point a directional antenna in the direction you wish to communicate. This shows a total lack of understanding of the nature of radio communications by some representatives of the power companies.

But this also means that coupled with the way that radio waves are bent or reflected by the ionosphere, that even one or two large BPL installations would raise the noise levels above acceptable levels globally, even thousands of miles away, and even in unpopulated areas where there are no nearby BPL installations.

There are a great multitude of ways to provide broadband internet access to areas that will not pollute the entire globe. There are Fiber To The Premisis (FTTP), WiMAX (802.16). There are even examples of cellular WiFi, as demonstrated in Chaska, MN, where the city provides universal broadband for $16 a month, a cost that is a small fraction of what BPL proposals think they will achieve in even the most optimistic models.

Please do not allow the power companies (via BPL) to get involved in an area which they know very little about, will not be able to make a profit, and where they will endanger countless lives and destroy a very unique GLOBAL resource.

Sincerely,

Brian Dall